WHAT IS CLAIMED IS:

1. A method for inhibiting the adherence of lymphocytes to endothelial cells comprising exposing the lymphocytes to an effective amount of an antibody, or a fragment or derivative thereof, that binds to $\alpha 4\beta 1$.

2. The method of claim 1 in which the antibody is a monoclonal antibody.

3. The method of claim 2 in which the antibody is P4C2, deposited with the ATCC and having the accession number HB10215.

4. The method of claim 1 in which the antibody binds to $\beta 1$.

5. The method of claim 4 in which the antibody is P4C10, deposited with the ATCC and having the accession number HB10214.

6. A method for inhibiting the adherence of lymphocytes to endothelial cells comprising exposing the lymphocytes to an effective amount of a peptide that binds to $\alpha 4\beta 1$, wherein the peptide comprises at least a portion of the CS-1 region of fibronectin, or a derivative thereof.

7. The method of claim 6 in which the peptide is conjugated to an antibody targeted toward endothelial cells.

8. The method according to claim 6 in which the peptide comprises at least a portion of the sequence EILDVPST.

9. The method according to claim 6 in which the peptide comprises at least a portion of the sequence EILDV.

10. The method according to claim 6 in which the peptide comprises at least a portion of the sequence LDVPST.

11. The method according to claim 6 in which the peptide comprises at least a portion of the sequence LVD.

12. An antibody, antibody fragment or derivative thereof which may be used to inhibit the adherence of lymphocytes to endothelial cells.

13. An antibody, fragment, or derivative according to claim 12 which binds to the $\alpha 4\beta 1$ receptor.

14. The antibody of claim 12 which is a monoclonal antibody.

15. The antibody of claim 14 which is P4C2, produced by the hybridoma deposited with the ATCC and having the accession number HB10415.

16. The antibody of claim 14 which is P4C10, produced by the hybridoma deposited with the ATCC and having the accession number HB10214.

17. An antibody, fragment or derivative thereof which recognizes an epitope defined by monoclonal antibody P4C2.

18. The antibody, fragment or derivative of claim 17, which competitively inhibits the binding of monoclonal antibody P4C2.

19. An antibody, fragment or derivative which recognizes an epitope defined by monoclonal antibody P4C10.

20. The antibody, fragment or derivative of claim 19, which competitively inhibits the binding of monoclonal antibody P4C10.

21. A pharmaceutical composition comprising an effective concentration of antibody, antibody fragment, or derivative thereof, which inhibits the adherence of an extracellular matrix receptor on lymphocytes to endothelial cells in a pharmacologically suitable carrier.

22. The pharmaceutical composition of claim 21 in which the antibody, fragment, or derivative binds to $\alpha 4\beta 1$ receptor.

23. The pharmaceutical composition of claim 22 in which the antibody is a monoclonal antibody.

24. The pharmaceutical composition of claim 23 in which the antibody is P4C2, produced by the hybridoma deposited with the ATCC and having the accession number HB10215.

25. The pharmaceutical composition of claim 23 in which the antibody is P4C10, produced by the hybridoma deposited with the ATCC and having the accession number HB10214.

26. A pharmaceutical composition comprising an effective concentration of a peptide which binds to $\alpha 4\beta 1$ and which inhibits the adherence of lymphocytes to endothelial cells, in a pharmacologically suitable carrier, wherein the peptide comprises at least a portion of the CS-1 region of fibronectin, or a derivative thereof.

27. The pharmaceutical composition of claim 26 in which the peptide binds to $\alpha 4\beta 1$.

28. The pharmaceutical composition of claim 26 in which the peptide comprises the sequence EILDVPST.

29. The pharmaceutical composition of claim 26 in which the peptide comprises the sequence EILDV.

30. The pharmaceutical composition of claim 26 in which the peptide comprises the sequence LDVPST.

31. The pharmaceutical composition of claim 26 in which the peptide comprises the sequence LDV.

32. A method of preventing lymphocyte migration into tissues comprising administering an effective amount of an antibody, or a fragment or derivative thereof, which prevents the adhesion of lymphocytes to endothelial cells via an extracellular matrix receptor to a subject in need of such treatment.

33. The method of claim 32 in which the antibody, fragment, or derivative binds to $\alpha 4\beta 1$.

~~34~~ 6. The method of claim 33 in which the antibody is a monoclonal antibody.

~~35~~ 7. The method of claim ~~34~~ in which the antibody is P4C2, deposited with the ATCC and having the accession number HB10215.

~~36~~ 7. The method of claim ~~34~~ in which the antibody is P4C10, deposited with the ATCC and having the accession number HB10214.

37. A method of preventing lymphocyte migration into tissues comprising administering an effective amount of a peptide binding to $\alpha 4\beta 1$ in a pharmacologically suitable carrier, which prevents lymphocyte adhesion to endothelial cells to a subject in need of such treatment, wherein the peptide comprises at least a portion of the CS-1 region of fibronectin, or a derivative thereof.

38. The method according to claim 37 in which the peptide comprises the sequence EILDVPST.

39. The method according to claim 37 in which the peptide comprises the sequence EILDV.

40. The method according to claim 37 in which the peptide comprises the sequence LDVPST.

41. The method according to claim 37 in which the peptide comprises the sequence LDV.

42. A method of inhibiting the adherence of cells expressing $\alpha 4\beta 1$ to a cell or extracellular matrix comprising a ligand for $\alpha 4\beta 1$, comprising the step of exposing the cells expressing $\alpha 4\beta 1$ to a peptide that binds to $\alpha 4\beta 1$, wherein the

peptide comprises at least a portion of the CS-1 region of fibronectin, or a derivative thereof.

43. The method of claim 42, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an activated endothelial cell.

44. The method of claim 43, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an IL-1β activated endothelial cell.

45. The method of claim 42, wherein the peptide comprises the sequence EILDVPST.

46. The method of claim 42, wherein the peptide comprises the sequence EILDVP.

47. The method of claim 42, wherein the peptide comprises the sequence LDVPST.

48. The method of claim 42, wherein the peptide comprises the sequence LDV.

49. A pharmaceutical composition comprising an effective concentration of a peptide that binds to $\alpha 4\beta 1$ and that inhibits the adherence of cells expressing $\alpha 4\beta 1$ to a cell or extracellular matrix comprising a ligand for $\alpha 4\beta 1$, wherein the peptide comprises at least a portion of the CS-1 fragment of fibronectin, or a derivative thereof.

50. The method of claim 49, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an endothelial cell.

51. The method of claim 50, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an IL-1β endothelial cell.

52. The method of claim 49, wherein the peptide comprises the sequence EILDVPST.

53. The method of claim 49, wherein the peptide comprises the sequence EILDVP.

54. The method of claim 49, wherein the peptide comprises the sequence LDVPST.

55. The method of claim 49, wherein the peptide comprises the sequence LDV.

56. A method of preventing migration of cells expressing $\alpha 4\beta 1$ into tissues, comprising the step of administering an effective amount of a peptide binding to $\alpha 4\beta 1$ in a pharmaceutically suitable carrier, which prevents adhesion of cells expressing $\alpha 4\beta 1$ to a cell or extracellular matrix comprising a ligand for $\alpha 4\beta 1$, to a subject in need of such treatment, wherein the peptide comprises at least a portion of the CS-1 region of fibronectin, or a derivative thereof.

57. The method of claim 56, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an endothelial cell.

58. The method of claim 57, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an activated endothelial cell.

59. The method of claim 58, wherein the cell comprising a ligand for $\alpha 4\beta 1$ is an IL-1β activated endothelial cell.

60. The method of claim 56, wherein the peptide comprises the sequence EILDVPST.

61. The method of claim 56, wherein the peptide comprises the sequence EILDV.

62. The method of claim 56, wherein the peptide comprises the sequence LDVPST.

63. The method of claim 56, wherein the peptide comprises the sequence LDV.